SIM CITY

AMSTRAD & SPECTRUM

English

MAXIS

INFOGRAMES

CREDITS

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Dedicated to Cassidy.

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I - INTRODUCTION

A) Foreword

Enter SimCity and take control. Be the undisputed ruler of a sophisticated real-time City Simulation. Create your own dream city (or dream slum) from the ground up.
Whether you take over an existing city or build a new one, you are the Mayor and City Planner with complete authority.
Your city is populated by Sims - Simulated Citizens. Like their human counterparts, they build houses, condos, churches, stores and factories. And, also like humans, they complain about things like taxes, mayors, taxes, city planners and taxes. If they get too unhappy, they move out; you collect less taxes, the city deteriorates.

The next few sections will explain the overall concept of SimCity and give information that will help you win Scenarios and design and build better cities.
SimCity is a SYSTEM SIMULATION. The challenge of playing a SYSTEM SIMULATION game is to figure out how the system works and take control of it. As master of the system you are free to use the TOOLS to create and control an unlimited number of systems (in this case cities) within the framework and limits provided by the RULES.
In SimCity, the RULES to learn are based on city planning and management, including: Human, economic and political factors, survival factors, the strategies in order to face disasters, unemployment, crime and pollution, and life quality in your city.

The TOOLS allow you to:
plan, zone terrains, clear the city of trees,
build roadways, airports and sea ports,
set up and maintain a power grid,
sow desolation and destruction creating natural disasters.
But the most important TOOL of all is the Simulator itself. Test your plans and ideas as you watch the city grow or shrink through the immigration and emigration of industrious Simulated Citizens. Sims will move in and build homes, hospitals, churches, stores and factories in the zones you provide, or move out in search of jobs or a better life elsewhere. The success of the city is based on the quality of the city you design and manage.

B) The goals of SimCity

There are many goals to be pursued and reached in SimCity.
Here is one in particular:
Your dream city
Perhaps the main goal of SimCity is for you to design, manage and maintain the city of your dreams. Your ideal place to live may be a bustling megalopolis, lots of people, lots of cars, tall buildings; high-energy, high-density living. Or it may be a small rural community, or a linked group of small communities providing slow paced country living.

As long as your city can provide places for people to live, work, shop and play, it will attract residents. And as long as traffic, pollution, overcrowding, crime or taxes don't drive them away, your city will live.

II - GETTING STARTED

A) Loading SimCity on AMSTRAD

Hardware required for AMSTRAD:
Amstrad 464, 664, 6128 with a disk drive.
A monitor or a colour TV.
A joystick is recommended (before starting SimCity, check that the joystick is properly connected to the joystick port).
1 or several blank disks to store the data.

Starting the disk version:
Switch off your computer. Insert the program disk in the drive. Switch your computer back on. Type |CPM (to get |, press the keys @ and SHIFT simultaneously). Press RETURN.

Starting the tape version:
Insert the cassette in the recorder. Switch on the computer. Type RUN "" and press the PLAY button on your recorder. Press RETURN.

b) Loading SimCity on SPECTRUM

Hardware required for SPECTRUM:
SPECTRUM 48K, 128K+2 with a program recorder.
Or SPECTRUM ZX+3 with a disk drive.
A monitor or colour TV.
1 or several blank disks to store the data.

Starting the disk version:
Switch off your computer and monitor. Insert the program disk in the drive. Switch your computer back on. The LOADER option will be selected automatically. Press the RETURN key, the game will load automatically.

Starting the tape version:
Check all the connections. Insert the cassette in the recorder. Type LOAD"" and press the PLAY button on your recorder. Press RETURN on the keyboard.

C) Selecting the level of difficulty

After the program has loaded, the computer will ask you to choose the difficulty level of the game.

There are three possibilities.

- 1) EASY: You start the game with 20,000 $. This is the default level. The characters appear in green instead of blue for the other two options.
- 2) MEDIUM: You start the game with 10,000 $.
- 3) DIFFICULT: You start with 5,000$ only.

To select a level, take the direction UP or DOWN with your joystick. The option you point at appears with green characters. To confirm, press the FIRE button.
If you don't have a joystick, select the level with the keys Q and A, then confirm, pressing the space bar.

D) The program and data disks

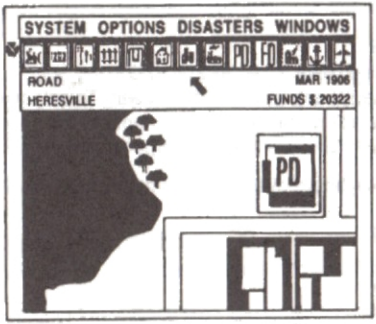
The SimCity program disk contains programs which run SimCity. When you create new cities, you will probably want to save them in order to use them later on. For this you need at least one data disk. Such a disk may contain up to sixteen cities.

To initialize a data disk, insert a new disk in your drive and select the option SIM FORMAT DISK from the SYSTEM MENU. To do this, place your cursor (joystick or the keys Q and A) on the SYSTEM option and press the fire button or space bar.
With the joystick or the keys highlight the option SIM FORMAT DISK and press the Fire button or space bar.

A confirmation window appears. If you want to format your disk, select "YES PLEASE"; if not, select "NO THANKS". Press the fire button to confirm your choice.

Once the operation is achieved, you return automatically to the EDIT mode. Now get ready to play.

III - TUTORIAL - FIRST STEPS WITHIN SIMCITY



We will take you now for a walk through SimCity, exploring the fundamental functions and commands. It will be useful to refer to the ZONE REFERENCE CHART at the end of the manual. Later, the CITY DYNAMICS will give you precious hints when building your own cities.

A) The menus of the edit screen

When the program has finished loading, you will see the edit screen appear. This is your main operation field, having at your disposal a view on a portion of your city and its landscape. In this screen, you will be able to access all the menus of the game. There are four of these menus:

- SYSTEM: which allows you to load, save, start a new city, format data disks and get some information about the game.
- OPTIONS: which allows you to confirm or inhibit various game settings such as the sound, the option auto-bulldozer, auto-budget and "zone demolish wait".
- DISASTERS: which allows you to activate disasters - natural or not -within the city limits in order to spice up the game.

- WINDOWS: which allows you to get an Evaluation rating in poll form your performance as city mayor, and Maps viewing different problems in your town and finally to determine the Budget and local taxes.

Selecting the MENUS :
Proceed as for formatting disks in paragraph II) D.
The names of these menus are on top of the screen. To select one of these menus, just place your cursor with the joystick or the keys on the name of the menu and press the fire button or space bare. A pull-down menu will appear then.

For information, the keyboard direction keys at your disposal are the following:
- O for direction LEFT.
- P for direction RIGHT.
- Q for direction UP.
- A for direction DOWN.

Note: When we talk about pressing the fire button, you may use the space bar as well.

Selecting a menu option:
When opening a menu, the first option on top of this menu is selected automatically. It appears with green characters instead of blue ones. If you want to confirm this option, press the fire button.
If you want to select another option, take the direction UP or DOWN with the joystick or the keys, to highlight another option. When you have made your choice, press the fire button or space bar. The chosen option will be activated.

If you do not want to select either of the options, choose "EXIT MENU" at the bottom of the screen and confirm with the space bar.

B) Organization of the edit screen

When you start SimCity, a new terrain will be generated. You will be always free to choose between using this terrain, generating a new one, modifying or clearing it completely or build a new one starting from nothing.

From the bottom to 2/3 of the screen, stretches the edit window outlining the terrain area which you can act upon.
Above this zone, you will see the COMMENT part which displays figures or messages telling what is going on in your city. A detailed description of this comment part will be given in the following.

Above the comment part, there is a line of icons allowing you to act on your city and its environment. We will see later on the details about the utilization of every symbol.

Finally, on the top line of the screen, appears the list of the 4 main menus that we mentioned already.

C) Movement and screen scrolling

In order to view the whole city, it will be necessary to scroll the screen.

To do this, press the cursor keys. Each time you press a cursor key, the terrain will scroll a little bit in the chosen direction. Another solution consists in moving the cursor with you joystick to an edge (right, left or bottom) and keep the same direction pressing the fire button. The terrain will scroll in the chosen direction.
Or else on AMSTRAD, you place the cursor on the little cross at the left, on top of the screen. After you have pressed the fire button, the cursor will disappear. Just move the joystick in the desired direction or use the direction keys. When you want to make the cursor re-appear, press the fire button again.

If you want to move only the cursor without making the screen scroll, use the direction keys (O, P, Q, A) or the joystick.

D) Example of first steps in SIM CITY

You are on the edit screen. The icon selected by default is the road icon.
At the beginning you will find an area with much clear terrain, in order to let you start easily.
You cannot build on water except bridges, tunnels and power lines.
You can clear forests (green) and rubble (brown).

The "pointer" is a small, white, flashing square, outlining the area where you put a road section. To move the pointer use the joystick or the keys (O, P, A, Q).

Move your pointer over some forest land and press the fire button. The forest section under your pointer is now a road. Now, trace a circle in order to design a kind of ring road. (Do not make it too large. Stay within the screen limits and don't overestimate your city's development). Then go to the next step.

Detailed explanation of the comment part:
Each edit function has its price. In the upper left corner of the screen, in the comment part, there is the so-called COSTS BAR. which indicates the price you will have to pay each time you use the activated icon. E. g. every time you use the bulldozer you will have to pay $1; zoning a plot of land as residential costs $100.
In the centre of the comment part, at the right, you will see the FUNDS BAR which indicates your remaining capital.
Now select the house icon moving the cursor (joystick or keyboard) and press the fire button. Go back to the edit screen. Your pointer is now a larger square outline indicating how much clear space you will need to create a residential zone (That's where the Sims live).

Pressing the fire button in clear terrain "zones" the land. The "R" in the centre of the zone indicates that it is a residential zone. The flashing lightning symbol indicates that the zone has no power and therefore cannot develop. All zones have imperatively to be powered, otherwise they will remain at their original state.

Then select the commercial icon and place a commercial zone near your residential. There will also be the flashing lightning in the zone. Here the Sims work, consume and build shops, gas stations, office buildings, etc...

If there are trees, you can only place the zone after having cleared the terrain with the bulldozer, unless you have actived the AUTO-BULLDOZE option from the OPTIONS menu. In this case you will not have to bulldoze a forest before zoning.

Then select the industrial icon and map out an industrial zone next to a commercial zone.

Then you will need energy, or your zones will never develop. Point to the power plant icon. You will notice that it is larger than the other zones. After having chosen between a nuclear power plant at 5000$ and a coal power plant at 3000$ (same procedure as for selecting the difficulty level at the start), place it in some open space near your residential zones. If your power plant is not adjacent to a zone, you will have to run a power line from your power plant to the next zone.

To do this, click the power line icon. Using your joystick and fire button, lay power lines from your power plant to your zones. Adjacent power line sections will automatically connect themselves to one another.

In a moment, the flashing symbols will disappear, indicating that your zones have been powered. Soon you will see small houses start to appear. The Sims have started to move in.

Note: When you zone land, you designate where building is allowed. It is the Sims who actually build.

Note that when you select the various icons, the icon description and its associated costs will be displayed in the upper left-hand corner of the comment part. The funds bar at the right displays your total funds available. If you do not have enough money in your treasury to pay for a certain function, that icon will be "ghosted" on your screen and is unavailable for use.

Check that all the zones are powered. As soon as the zones begin to develop, you collect taxes. This is done automatically.
For reminder, the money at your disposal is displayed in the COMMENT part (FUNDS), in the centre at the right.

The bigger the city, the higher the land values, and the more taxes you will collect.
To accelerate the development, you will have to lay roads. Select the road icon again and add roads from your residential housing to the commercial and industrial areas to allow the Sims to commute to work. Once you have roads, traffic will be generated.

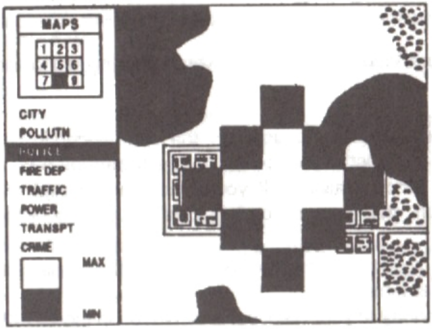
Roads and power lines cannot be laid one over the other, but they can cross each other at right angles.

This is all the basic information you need to run SimCity, but we suggest reading on. The following paragraphs explain in detail how to use each program function. We will also gives some hints and tips for using the program.

IV - THE WINDOWS MENU

Point with the cursor to the WINDOWS menu, and press the fire button, to display the menu.

A) The MAPS window

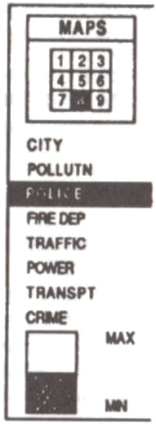


The MAPS WINDOW gives you various overviews of your city and terrains showing physical or demographic details.

To select this mode, choose MAPS from the WINDOWS menu.

On the first third at the left side of the screen, you will see the different sub-options. On the 2 thirds at the right side you will see a portion of your city. The city is divided into 9 regions overlapping on their edges. If you press the number keys on top of the keyboard, you will view all the regions from 1 to 9. To change the region in the view, just press a number key.

The number corresponding to the region displayed appears in blue on white background, in the small numeric keypad on top left of the screen.
Note: On Spectrum, to view the regions, press the CAPS SHIFT key and the number simultaneously.
First you view region 1. The sub-option selected is TRANSPT displaying your roads and rail lines. Use this view to examine your city's access to specific areas and to plan future expansion of the network.These options often show the dynamic balance of the city. The density key will be shown in the lower left corner of the window. Depending on your monitor, this will either be in colour or in shades. The colour on the bottom indicates the minimum density, growth or value. If you want to select another sub-option, move the joystick downwards and other information will appear automatically:

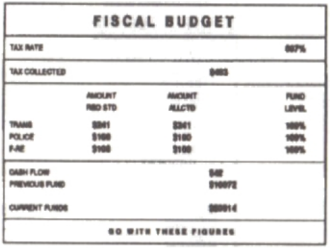


- **CITY:** shows all roads, developed zones and areas. Use this map to find non-developed areas and plan the expansion of the zones.
- **POLLUTN :** shows levels of pollution throughout your city. The lighter the zones, the more they are polluted. Do not forget to place the industrial zones far enough from residential ones and build parks.

- **POLICE** : shows the effective radius of your police departments. The clear zones indicate a maximum efficiency. These are zones where there is practically no crime. The longer the distance between a zone and the next police department, the higher is the crime rate. Place the police departments so that their action ranges join together, in order to protect your city.
- **FIREDEP :** fulfills the same function for the fire departments. After disasters or fires a good arrangement of the departments will turn out to be essential (do not forget to assign enough money to the fire departments in your budget, otherwise they would not be effective).
- **TRAFFIC :** shows the amount of traffic on your maps. Spot traffic problems and determine where new roadways and transit lines are needed.
- **POWER :** shows you the powered zones in white. This gives you a general state of development of your power network and the city's needs.
- **CRIME :** shows the level and location of crime in your city. The white zones are seats with a high crime rate. This way you can decide where to place precisely your next police departments.

To exit the MAPS option, simply press the fire button.

B) The BUDGET window



In this BUDGET window you will assign the credits necessary for the police, fire and transport departments. When your first taxes are collected in a new city, and each year after, this window will appear (unless you select the Auto-Budget function). You will be asked to set the funding levels for the fire, police, and transportation departments, and to set the property tax rate.

You can raise and lower budget levels that correspond to each category and adjust your tax rate. To do this, use the joystick or direction keys to highlight the category and press the fire button. Increase the rate giving the direction UP (joystick or keyboard) or lower it with the direction DOWN.
When you have fixed the various rates of the BUDGET, select "GO WITH THESE FIGURES" and press the fire button, to exit the BUDGET WINDOW.

The level of budgeting requested by each department is based on the number of fire departments, police stations, and the amount of roadways and transit lines in your city. These figures increase as your city grows - it costs money to maintain your city infrastructure.

C) The EVALUATION window

The EVALUATION WINDOW gives you a performance rating.
PUBLIC OPINION data is presented in poll form, rating your overall job as mayor and listing 7 of the city's most pressing problems (crime, taxes, pollution, housing prices, traffic, unemployment, fires). The most important points are highlighted. This way, you are able to spot the main preoccupations of your citizens.

You are advised to keep your residents happy or they might migrate away, and you will be left with a "ghost town."
To exit the Evalutation window, simply press the fire button.

Some example problem / solving strategies are:
- Crime: Build more police departments, or try to raise land values.
- Housing: Provide more residential zones.
- Unemployment: Build more industrial and commercial zones.
- Traffic: Possibly add more roads or mass transit.

STATISTICS on population, net migration, and assessed value are displayed, along with the city game level and an overall city score. This data is calculated once a year at budget time. Population shows how many people live in your city now; net migration shows how much the population changed over the last year. Assessed value represents the net worth of all city-owned property.

V - THE ICONS

In order to develop your city, you will have to select between the various icons at your disposal, those which represent your choice in matters of urbanism. Remind that you only define the zones, the Sims actually decide to move in or not.

A) Description and utilization of the icons

To activate one of these icons, select the desired icon with the cursor, as already described, and click. The name or explanation concerning each element will appear in the title bar.

KEYBOARD SHORTCUT COMMANDS: The number keys 1 to 0 select the icons from left to right (from bulldozer to fire department) directly.
Note: On Spectrum, press the SYMBOL SHIFT key and the number simultaneously.

When you have selected an icon and moved to the edit screen, a pointer will appear on the screen to show the location and the size of the chosen function. You cannot change the location of the pointer. Use the cursor keys, as we have seen previously to make the screen scroll. Use the fire button or space bar to activate the function.
If you try to place a zone, road, power line etc., over an already existing zone, road, power line etc., a beep will indicate that this place is already occupied. You will have to choose another place or use the bulldozer to clear the area.
NOTE: There are some exceptions to the rule above: the power lines and roads can cross water and each other.

BULLDOZER clears trees and shrubbery, creates landfill along the water, levels developed, existing zones and clears rubble caused by disaster. Bulldozing is also very efficient to fight against fires.
It costs $1 to bulldoze a section of land.

ROADWAYS connect developed areas. Intersections and turns are automatically created. Lay continuous roads by pressing the fire button and dragging your pointer. Be careful - if you accidentally lay a road in the wrong place you will have to pay for bulldozing and rebuilding.

Roads may not be placed over trees, shrubbery, or zoned areas. They can cross over power lines and transit lines only at right angles.
Laying roads across water creates a bridge. Bridges can only be built in a straight line - no curves, turns or intersections. Shorelines must be bulldozed prior to building a bridge.
It costs $10 to lay one section of road and $50 to lay one section of bridge.

Note: to place a bridge, lay a section of road exactly on the shoreline, then lay another one over water joining the road section on the shore. The bridge will be automatically extended to the other shore.

POWER LINES carry power from power plants to zoned land and between zones. All developed land needs power to function.
Power lines cannot cross trees, shrubbery, or zoned land. Power is conducted through adjacent zones. Unpowered zones display the flashing power symbol. There is a delay between the time you power up a zone and when the flashing light disappears. The delay grows longer as the city grows larger.

Junctions and corners are automatically created. Power lines across the water must be horizontal or vertical - no turns, curves or intersections. Power lines consume some power due to transmission inefficiencies.
It costs $5 to lay one piece of power line on land, $25 on water.
To lay a power line over water just proceed the same way as for the bridge.

TRANSIT LINES create a railway system for intra-city transit. Place tracks in heavily trafficked areas to help alleviate congestion.
Intersections and turns are created automatically. Tracks laid under rivers will appear as dashed lines. These underwater tunnels must be vertical or horizontal - no turns, curves of intersections.

Transit lines are maintained by transportation department funds. The level of funding affects the efficiency of the system.
It costs $20 per section of track on land, $100 per section under water. To realize tunnels under water, follow the same procedure as for the bridges.

PARKS can be placed on clear land. Parks, forests and water raise the land value of surrounding zones. Parks can be bulldozed as fire breaks or reserve space for later mass transit expansion.
It costs $10 to lay one segment of park.

RESIDENTIAL ZONES are where the Sims build houses, appartments and community facilities such as schools and churches.
Factors influencing residential value and growth are pollution, traffic density, population density, surrounding terrain, roadway access, parks, and utilities.
It costs $100 to zone one plot of land as residential.

COMMERCIAL ZONES are used for many things, including retail stores, office buildings, parking garages, and gas stations.
Factors influencing the value and growth of commercial areas include internal markets, pollution, traffic density, residential access, labor supply, airports, transit access and utilities.
It cost $100 to zone one plot of land as commercial.

INDUSTRIAL ZONES are for heavy manufacturing and industrial services.
Factors influencing the growth of industrial areas are external markets, seaports, transit access, residential access, labor supply and utilities.
It costs $100 to zone one plot of land as industrial.

POLICE DEPARTMENTS lower the crime rate in the surrounding area. This in turn raises property values. Place these in high-density crime areas. The efficiency of a station depends on the level of police department funding.
It costs $500 to build a police station.

FIRE DEPARTMENTS make surrounding areas less susceptible to fires. When fires do occur, they are put out sooner and do less damage if a station is near. The effectiveness of fire containment depends on the level of fire department funding.
It costs $500 to build a fire station.

STADIUMS encourage residential growth. The message window will indicate when the city wants a stadium. You may build a stadium in you city prior to create a lot of traffic. Properly maintaining a stadium requires a good road and transit network.
It costs $3000 to build a stadium.

POWER PLANTS can be coal or nuclear, chosen from a sub-menu provided when (after selecting the power plant icon) you place the cursor on the desired option and press the fire button to confirm.

The nuclear plant is more powerful but carries a slight risk of meltdown. The coal plant is less expensive, but less powerful and it pollutes.
All zoned terrains need energy to develop and grow. When developed zones lack of energy, they progressively return to bare ground, unless they are powered up again.

According to the size of your city, you have to build several power plants. We recommend you, build two or three power plants more than needed, to support the power supply in case of emergency.
Coal power plants cost $3000 to build. Nuclear power plants cost $5000.

SEAPORTS increase the potential for industrial growth. They have little effect in a small city, but contribute a lot to industrialization in a large city.
Seaports should be placed on a shoreline. The shoreline must be bulldozed prior to zoning a seaport.
It costs $5000 to zone land for use as a seaport.

AIRPORTS increase the growth potential of your commercial markets. Once a city starts getting large, commercial growth will level off without an airport.
Airports are large and expensive and should not be built unless your city can afford one. Once you build an airport you will see airplanes flying above you city to and from the airport.
It costs $10,000 to zone land for use as an airport.

VI - THE SYSTEM MENU

A) Description and utilization of the commands

- **ABOUT SIMCITY:** gives you some additional information about SimCity.

- **START NEW CITY:** generates a new, empty terrain to start a new city different from the one you are simulating. You will be asked to confirm (Yes, Please) or refuse (No, thanks).

- **USE OLD LANDSCAPE:** this command allows you to start a new city from the ground with the same terrain, that you have previously used. This way, you are given a new chance on an exactly similar terrain under the same conditions.

- **INPUT NEW GENE:** this option allows you to predefine the general form of your terrain. Each landscape is chosen between 65 535 different possibilities. If you liked the type of your previous terrains and select its GENE number (for Generation) again, you will get exactly the same terrain. However, you won't find your ancient buildings or creations. The terrain will be absolutely clear.

Procedure: After having selected the option INPUT NEW GENE, you will see that the figures standing for the current landscape GENE number turn to green. Type in 5 figures for the new GENE number. Press RETURN to confirm.

Then you will return to the menu proposing INPUT NEW GENE and START CITY WITH NEW GENE. Now select START CITY WITH NEW GENE. Before you start playing on this terrain, you will be asked to select a difficulty level as seen before.

START CITY WITH THIS GENE: this command allows you to play again on a clear terrain, with the same GENE number as displayed in "Current Landscape Gene". That means you use the same terrain as in the previous game, unless you have already changed the number using the the "Input New GENE" option.
Otherwise, if you use this function directly, this will avoid entering a new GENE number, and restart on a randomly generated terrain among 65 635 possibilities, as it would be the case for START NEW city. Moreover you will know in advance the general type of your landscape.

SYSTEM OPTIONS DISASTERS WINDOWS

ROAD MAR 1906

HERESVILLE FUNDS $ 20322

TYPE NEW FILE NAME
THEN PRESS ENTER

FILE NAME : STEVE

- **LOAD CITY:** To load a previously saved city, you select this option. Choose a city to play again with, using the joystick (UP/DOWN) and press the fire button or space bar to load this city. If there is no city saved on your disk, you are given the choice between "LEAVE" (to return to the edit screen) and "FORMAT DISK", to initialize a disk, so that it is able to receive city data. Beware not to format your original.

DISK FILES	
NAME	N°
STEVE	1
NAME	2
NAME	3
NAME	4

- **CATALOGUE:**

If you just want to see what cities you have already saved, select CATALOGUE DISK. You are not able to load a city with this command. If there is no city saved on your disk, the program will offer you the same possibilities as for LOAD CITY with LEAVE and FORMAT DISK. There again, beware not to format your original.

- **SAVE CITY** saves any city-in-progress to disk for later use. Once you have selected this option, you will have to enter the name under which you want to save the city. Type the city's name and press Return.
Don't forget to save your cities on a disk with the special SimCity format with the command SIM FORMAT DISK.
Do not try to save on other disks, especially the program disk.
Take care not to save two cities with the same name. The new one will be saved, erasing the ancient one.
Beware not to switch off the computer or the disk drive, neither remove the disk before the saving is achieved. The city to be saved would be lost.
If you want to save a city at several development states or a terrain with various strategies, use different names for every city or terrain version.
If you activate SAVE accidentally or change your mind, press Return without entering the name. This will cancel the SAVE operation.
- **SIM FORMAT disk:** as we have seen previously, this commands allows you to format a blank disk in order to support your new cities.
- **EXIT SIMCITY:** ends SimCity. You will be asked to confirm your choice.
- **EX!T MENU:** allows you to return to the edit screen and close the SYSTEM menu.

VII - OPTIONS MENU

This menu allows you to enable or disable certain minor tasks of the simulation.

A) Description and utilization of the commands

To activate or disactivate these options, highlight the name of the option and press the space bar. Depending on its previous state, the option will be switched on or off, and you exit the menu. A checkmark to the left of an item indicates that the option is active.

AUTO-BULLDOZER: allows you to place zones, roadways, etc., directly on top of trees and shorelines without manually bulldozing first. You will be charged the same as for manual bulldozing. This option is active at the beginning of the game.

AUTO-BUDGET: avoids the budget window popping up every year and you to approve it. When the option is activated, it keeps your budget at the same percentage settings, the fire, police and transportation department fundings included.

SOUND: switches the various city sounds off and on. If there is a check mark, there will be no sound.

ZONE DEMOLISH WAIT: When switched on, this option will prevent you from destroying thoughtlessly your constructions by impatience or bad manipulation of the Bulldoze option. This way, you will have to move the cursor on the centre of the zone to be demolished, and press the fire button for some time so that the destruction command will be effective.

SIMULATION SPEED: when selected, you will be given four possibilities which are FAST, NORMAL, SLOW and PAUSED (time is stopped, but you may build and zone all the same). A star indicates which speed is selected. The game starts with NORMAL speed. To change the speed, move the joystick up or down to highlight the desired option. Confirm pressing the Space bar or Fire button. You return automatically to the edit screen.

EXIT MENU returns you to the edit screen.

VIII - DISASTERS MENU

A) Description and utilization of the commands

The disasters menu allows you to activate disasters within the city limits. Use the disasters to test your capabilities facing emergency situations.
BEWARE: it would be wise to save the current city before launching a disaster; you can never know...
Use the cursor key to select a disaster. Press the Return key or the joystick button to activate the disaster.

FIRES: fire spreads fairly rapidly through forests and buildings, somewhat slower over roadways and transit lines. Fire will not cross water or clear terrain. Fire will let only ruins and rubble that have to be bulldozed prior to rebuilding.

Since fire will not spread across clear terrain, you can build fire breaks with the bulldozer. Just surround the fire with clear areas and it will stop spreading and eventually burn itself out. Note: You cannot directly bulldoze a fire.
Fires can be also caused by earthquakes.

FLOODS : occur near the water. They gradually spread and destroy buildings and utilities. After a while the flood waters recede, leaving behind cleared terrain. Avoid placing power plants, airports and stadiums near the shore. The least flood may destroy them definitely.

EARTHQUAKES : are the most devastating disaster. This is a MAJOR earthquake - between 8.0 and 9.0 on the Richter Scale. It will destroy buildings and start fires.
When an earthquake occurs, you will see the edit window shake for a while. When it stops, you will have to take charge and control the scattered fires.

AIR CRASHES: When a crash occurs, a fire will start, unless the crash is on water. A good strategy is to locate the airport away from the central city to minimize the fire damage. Air crashes can happen without being activated from the menu, if you have an operational airport.

TORNADOES : can occur anywhere on the map. Very fast and unpredictable, they can appear and disappear at a moment's notice. They can last quite long and you cannot stop it. A good strategy consists in following the tornado in a reasonable distance, and try to keep a maximum of zones powered.

NUCLEAR MELTDOWNS : are only possible if you are using a nuclear power plant. If you activate a meltdown, your nuclear plant will explode into flames. Radioactivity will prevent the irradiated zone to develop. All you can do is concentrate on another place to develop your city and wait for the radioactivity decreasing (at least 100 years).

DISABLE ALL: This command allows you to play without the impending disasters. Indeed, as time passes, disasters will regularly strike your city without being activated from the disasters menu. Choose this option, if you want your city to develop in peace and calm.

EXIT MENU returns you to the edit screen.

IX - SIMULATION MESSAGES

A) Description

During city life you will receive messages from the simulation program, to inform and forewarn you. They appear in the comment part.

Most of these messages are easy to understand, but others need some further explanation:

"FIRE DEPT NEEDS FUNDS": you have not supplied 100% of the fundings needed by the fire department to function correctly. Restore the situation or your fire department will not be effective enough.

"THE POLICE NEEDS FUNDS": The same thing is also valid for the police departments. If you do not react quickly enough, crime will develop dangerously in the city.

"TRANSPORT SYSTEM FALLING APART": There are not enough funds to maintain the roads. They fall into disrepair. React quickly.

"CITIZENS UPSET, TAXES TOO HIGH": You have set the local taxes too high. Your citizens are angry and begin to leave the city.

"NEED LARGER RAIL SYSTEM": you have to improve your transit lines and transport system in general.

"CITIZENS DEMAND A STADIUM": means that your citizens want to have fun assisting to sporting events.

"CITIZENS DEMAND A POLICE DEPARTMENT": the crime rate increases and the citizens feel not in secure anymore.

"CITIZENS DEMAND A FIRE DEPARTMENT": expresses the wish of the citizens for a fire department to prevent and fight eventual fires.

X - HINTS AND TRICKS

Using the disk:

The SimCity program disk is protected against copying. To make it last as long as possible, use it only to load the simulation, then remove it and use other disks to store your city data.

It is advisable to make several copies of the city data disks.

Saving cities and terrains:
Take care not to save two cities with the same name. The new one would erase the first one.

If you want a city to be saved at different states, or if you want to try several planning strategies, save each version with a different name.

When you like a randomly generated terrain or if you have conceived a good terrain, and maybe you will like to try different approaches on it, you can save the terrain without any building. When you build on it, save the new city with another name than the one with the clear terrain, otherwise you would lose the latter.

Budgetizing:
As you start a new city with limited funds ($5000 to $20,000), you will have to plan and establish a strict budget. A power plant should be a priority, for there can be nor growth nor income without.

Develop a city:
Refer to the CITY DYNAMICS CHART which explains how the factors concerning growth and development are bound.

The main points to remember in order to make a city thrive:

All the zones have to be powered to develop.

The zones have to be developed to collect the taxes.

The roads must give access from and to every zone so that it can develop completely.

The airports and sea ports will not help a little town to develop - so spare the money until your city is large enough.

Place the zones, roads, etc. wisely - you cannot move them and will have to pay to bulldoze and rebuild them.

As a rule of thumb, the number of industrial and commercial zones should approximately be equal. The number of residential zones should roughly equal the sum of industrial and commercial zones.

The proximity to forest and water rises the land value of the terrain and therefore the taxes collected.

Additional power plants and redundant power lines are expensive, but can maintain a zone powered during a disaster.

A larger, more populated city is not necessarily a better city. A self-sufficient city with a pleasant environment is better than a gigantic city without trees and shores, showing a permanent deficit.

Use the MAP options from the WINDOWS menu to plan the growth of the city, spot the problems and visualize your progress.
Save your city to disk before trying a new policy in order to reconsider the situation if it fails.

XI - INSIDE SIMCITY

Many factors influence the chance of your city's prospering or floundering; both internal factors (the structure and efficiency of your city) and external factors (the regional economy, disasters, etc).

ZONES

Your city is divided into three primary zones: residential, commercial and industrial. These zones symbolize the three basic pillars upon which a city is based: population, industry, and commerce. All three are necessary for your city to grow and thrive.

RESIDENTIAL ZONES are where the Sims live. Here they build houses, apartments and community facilities such as churches and schools. Sims are the workforce for your city's commercial and industrial zones.

INDUSTRIAL ZONES are used to site warehouses, factories, and other unsightly and polluting structures which have a negative impact on surrounding zones. One of the major goals of planning is to separate these "nuisance" from the areas where people live. In this simulation, industrial zones represent the "basic" production of your city. Things produced here are sold outside the city to an "external market", bringing money into the city for future growth.

COMMERCIAL ZONES represent the retail stores and services in your city, including gas stations, grocery stores, banks and offices. Commercial areas are mainly dedicated to producing goods and services needed within your city. This is called "non-basic" production or production for the "internal market."

POPULATION - RESIDENTIAL

The major factors controlling residential population are birthrate, availability of jobs and housing, unemployment, and quality of life within the city.

Birthrate as used here is actually a combination of the birthrate (+) and the deathrate (-). Within SimCity there is always a positive birthrate.

Availability of jobs (the employment rate) is a ratio of the current commercial and industrial populations to the total residential population. As a rule of thumb, the number of commercial and industrial zones together should roughly equal the number of residential zones.

If there are more jobs in your city than residents, new settlers will be attracted. If the job market declines during a local recession, your people will migrate away in search of jobs.

Housing for your residents is built in the residential zones. These zones must be powered and connected to the places of employment with a road and/or rail network. The structures built in residential zones are influenced by land value and population density.

Quality of life is a measure of relative "attractiveness" assigned to different zone locations. It is affected by negative factors such as pollution and crime, and positive factors such as parks and accessibility.

EXTERNAL MARKET - INDUSTRIAL

There are thousands of variables that influence your city. All these variables can be influenced by your actions with the exception of one.

The external market (the economic conditions that exist outside of your city) is controlled by the simulation - there is nothing you can do to change it. In many ways, this external market is the original source of all city growth. Towns frequently begin as production centres (steel towns, refineries, etc.) that service a demand in the surrounding region. As time passes, the external market grows to reflect the regional growth going on around your city.

The industry in your city will attempt to grow as the external market grows. For this to happen, there must be room for expansion (more industrial zones) and an adequate labor supply (more residential zones).

INTERNAL MARKET - COMMERCIAL

The internal market is completely influenced by the conditions within your city. Internal production, created in the commercial zones, represents all the things which are purchased and consumed within the city. Food stores, gas stations, retail stores, financial services, medical care, etc. - all depend on a nearby population to service. Within SimCity, the size of the internal market determines the rate at which commercial zones will prosper. Commercial zones need enough zoned land to build on and an existent, sufficient workforce to employ. The structures built in commercial zones are mainly influenced by land value and population density.

Commercial zones grow and develop to serve the expanding internal market. Commercial growth will usually be slow at first, when the population is small and needs very little. As your city grows, commercial growth will accelerate and the internal market will become a much larger consumer of your total city production.

This accelerating effect, when the external/industrial production is overtaken by the accelerating internal/commercial sector, can turn a sleepy little town of 50,000 into a thriving capital of 200,000 in a few short years.

TAX RATE

The tax rate you set controls the amount of income generated by your city. As taxes are collected each year (city time), the BUDGET WINDOW will appear, giving you the fiscal details of your city and a chance to adjust rates.

The simulation determines the amount of revenue collected by assessing each zone an amount based on its land value, current level of development and the current tax rate.

The tax rate has a global affect on your city's growth rate. If you set it low (0-4%), growth will be brisk but the city income will be low. If you set it high (10-20%), you will collect a lot in the short run but in the long run tax income will decrease along with the population. You must keep tax income high enough to meet city maintenance costs and invest in new development, but low enough not to scare off residents and businesses. A high tax rate is one way to control city growth, should you want to experiment with "growth control measures."

BUDGETING

City budgeting affects the way your city grows. City infrastructure cost is represented by three departments: police, fire and transportation. You may set the funding levels separately for each. All three departments will request a certain level of funding each year. You may supply all or part of the requested funds, in the attempt to balance safety needs and budgetary concerns.

POLICE DEPARTMENTS

Police stations lower the crime rate within a territory. The effective radius of your police station is related to the amount of funding allocated to the police department. There is a positive correlation between the value of land and proximity to a police station. Police Stations cost $100 per year to fund.

FIRE DEPARTMENTS

Fire departments prevent and extinguish fires. The level of funding determines the effective radius of a fire department. Fire departments put out fires within this radius much sooner than outside it, and decrease the chance that they will start in the first place. Fire Departments cost $100 per year to fund.

TRANSPORTATION DEPARTMENT

When you build roads and rail systems you are charged for construction and yearly maintenance. The larger your transportation network, the more it will cost for upkeep. If you decide not to or are unable to pay this maintenance cost, roads will slowly deteriorate and become unusable. The maintainance cost for each piece is: Road - $1, Bridge - $4, Rail - $4, Rail tunnel - $10.

POWER

Electrical power makes modern cities possible. Efficient and reliable power transmission to all zones is the goal of good "power management."

Periodically in the simulation the entire power grid of your city is checked for links to power. If a zone is connected (by other zones or power lines) to a power plant, the zone is considered powered (unless the power plant is overloaded).

Zones must be powered for development to occur. Many things (such as fires, floods, monsters and bulldozers) can knock down power lines and cause blackouts in parts of your city. Development will stop in unpowered zones, and if power is not quickly restored, the zone will decline back to its original state of emptiness.
Redundant power connections can make your power grid more reliable, but running more lines adds construction costs and transmission line loss.

TRANSPORTATION - TRAFFIC

One of the most most important elements of city structure is the transportation network. It moves Sims and goods throughout your city. Roads typically occupy as much as 25% - 40% of the land in urban areas. Traffic along these roads indicates which sections of your road system are used the most.

Traffic levels are simulated by a process known as "Trip Generation." Over time, each populated zone in the city will generate a number of trips, depending on the population. Each generated trip starts at the origin zone, travels down the road/rail network, and if a "proper destination" is reached, ends at the destination zone - otherwise, the trip fails. Trip failure indicates inaccessibility of a zone and limits its growth.

The majority of generated trips represent people commuting to and from work. Additional traffic is generated by residents traveling to shopping, recreation, etc.

Each road has a limited capacity for traffic. When this capacity is exceeded, traffic jams will form. Traffic jams drastically lower the capacity of a road, compounding the problem and frustrating drivers.

Traffic conditions fluctuate quickly, responding to things such as open bridges, sporting events and port activity. Avoid traffic problems by providing several routes for the traffic to take, and building rail systems when you can afford to.

POLLUTION

Pollution levels are tracked in all areas of your city. This is a general "nuisance level" which includes air and water pollution, noise pollution, toxic wastes, etc. Pollution has a negative impact on the growth of residential areas.

The primary cause of pollution is industrialized zones. The level of pollution created by an industrial zone increases with its level of growth.

Traffic is another cause of pollution. As your city gets large you may notice periodic smog generated from automotive commutes. Fires, Seaports, Airports, and Coal Power Plants also pollute.

There are limited means of combating the pollution level. Lowering traffic density, limiting industrial development, and separating the pollution from the residential areas will help.

CRIME

Crime rates are influenced by population density, local law enforcement, and land values. As population density increases in an area, the number of crimes committed increases. Crime will also increase in areas of low land value.

The most effective way to deal with high crime rates is to introduce a police station into the area. Based on its level of funding, the police station will reduce the rate of crime in its sphere of influence. A long-term approach to lowering crime is to raise the land value of the area. One way to do this is to demolish and rezone (urban renewal).

LAND VALUE

Land value is one of the most fundamental aspects of urban structure. The land value of an area affects how that area is used. In this simulation the land value of an area is based on terrain, accessibility, crime, pollution, and distance to downtown. The farther the residents have to go to work, the lower the land value where they live, due in part to transportations costs. The value of commercial zones depends greatly on accessibility by the populace.

Land value is also affected by surrounding terrain. If land is closer to water, trees, or parks, its value will rise. Creative placement of zones within the terrain, with little bulldozing, can make good use of this natural advantage.

Land value and crime rate have a feedback effect on each other. Lower land values cause crime rates to rise. Higher crime rates cause land values to drop, and can cause "transition areas" near your central city to rapidly decline in value.

CONCLUSION: GOOD CITY FORM

What is the good city? We are unlikely to arrive at an unequivocal answer; the diversity of human needs and tastes frustrates all attempts to provide recipes or instruction manuals for the building of cities. However, we can identify the crucial dimensions of city performance, and specify the many ways in which cities can achieve success along these dimensions.

A useful guide in this enterprise is Kevin Lynch's A theory of Good City Form (Cambridge, Mass. MIT Press, 1981). Lynch offers five basic dimensions of city performance: vitality, sense, fit, access, and control. To these he adds two "meta-criteria", efficiency and justice.

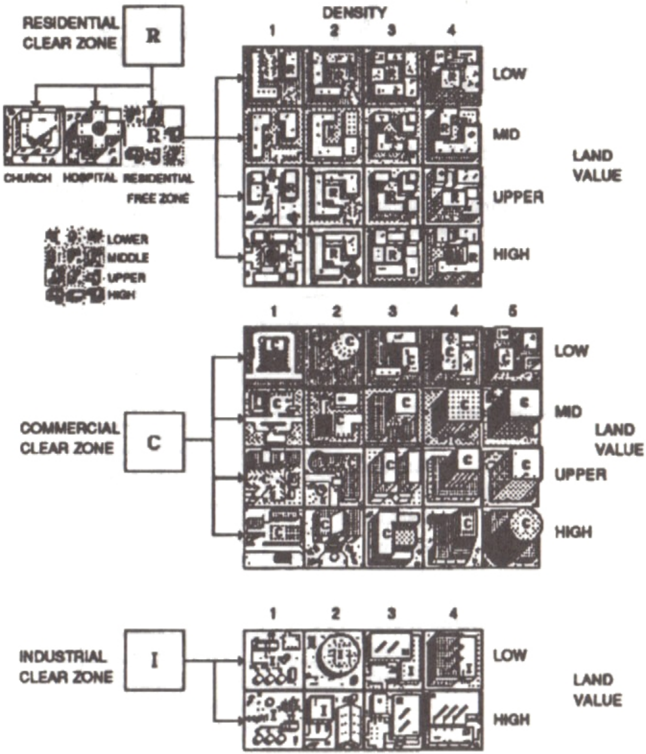
For Lynch, a vital city successfullly fulfills the biological needs of its inhabitants, and provides a safe environment for their activities. A sensible city is organized so that its residents can perceive and understand the city's form and function. A city with good fit provides the buildings, spaces, and networks required for its residents to pursue their projects successfully.

An accessible city allows people of all ages and backgrounds to gain from the activities, resources, services, and information that they need. A city with good control is arranged so that its citizens have a say in the management of the spaces in which they work and reside.

Finally an efficient city achieves the goals listed above at the least cost, and balances the achievement of the goals with one another. They cannot all be maximized at the same time. And a just city distributes benefits among its citizens according to some fair standard. Clearly, these two meta-criteria raise difficult issues which will continue to spark debates for the foreseeable future.

The criteria tell aspiring city builders where to aim, while acknowledging the diverse ways of achieving good city form. Cities are endlessly fascinating because each is unique, the product of decades, centuries, or even millennia of historical evolution. As we walk through city streets, we walk through time, encountering the city-building legacy of past generations. Paris, Venice, Rome, New York, Chicago, San Francisco - each has its glories and its failures. In theory, we should be able to learn the lessons of history and build cities that our descendants will admire and wish to preserve. That remains a constant challenge for all who undertake the task of city planning.

ZONE EVOLUTION CHART



CITY DINAMICS

These Levels → are affected by These Factors ↓

	Maintainence Funding	Taxes Collected	Land Value	Crime	Pollution	Traffic Density	Population Density	Industrial Population	Commercial Population	Residential Population	Overall City Score
Residential Population		+					+		+		+
Commercial Population		+					+		+		+
Industrial Population		+			+		+		+		+
Population Density				+							
Traffic					+	+					−
Pollution			−							−	−
Crime			−								−
Land Value		+		−						+	+
Trees-Parks			+								
Water			+								
Proximity to City Center			+								
Radioactivity					+						
Tax rate		+						−	−	−	−
Unemployment										+	−
Stadium										+	
Sea Port								+			
Airport									+		
Police Departments	+			−							
Fire Departments	+										
Roads	+										
Mass Transit	+										

\+ Positive Effect
\- Negative Effect